

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

## Learning Set 2



### The Sandwich-Cookie Challenge

Read through page 25 with your partner.



*What is the problem you need to solve?*

#### 2.1 Understand the Challenge

##### Identify Criteria and Constraints



Read the top half of page 26 with your partner.

Criteria	Constraints

*Choose 1 question to answer:*

*1. Do you think it will be easy to meet the criteria working under the constraints? What might go wrong?*

*2. What lessons from Learning Set 1 can you apply to this challenge?*

## **2.2 Investigate: How Many Drops of Water Fit on a Penny?**

**Design Your Investigation** *(Read this paragraph with your partner.)*

*What question are you trying to answer?*

*What are your procedures for answering this question?*

1.

2.

3.

4.

5.

6.

7.

8.

**Run Your Investigation** *(Read this section on p. 27 with your partner.)*

*As you run your investigation, record your results below.*

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_



**Communicate Your Results** *(Read this section at the bottom of p. 27 with your partner. Be ready to share your data.)*



As the data is shared with the class, record the class data on your “Drops on a Penny” line plot.

### **Analyze Your Data**

Look at the line plot and your written procedures to answer the following questions.

1. *Did your group have any problems (mistakes, spills, etc.) during the tests? Describe each one.*
2. *Did all groups get results similar to yours?*
3. *What did the distribution, or spread, of data on your line plot look like? What do you think this says about how reliable your lab’s data is? Do you think the cookie company will trust your results?*
4. *Why do you think there are differences between the data from different groups?*
5. *How might your procedure and problems you had relate to the differences?*
6. *What could the class do to get more consistent results in this challenge?*

Name\_\_\_\_\_ Date\_\_\_\_\_ Hour\_\_\_\_\_

**What's the Point?** *Read through this section at the bottom of p. 28.*

*What does this lesson teach you about how scientists work together to solve a problem?*